

High-performance

Multi-discipline



Imaging Analysis

BAS-2500

Whether you are in the life sciences or physical sciences, today's scientific investigations require that your imaging system be versatile enough to

handle multiple applications and provide data that is far more precise and reproducible than ever before. Fujifilm's BAS-2500 was developed with this in mind.

Perhaps your current research calls for electrophoresis, blots and macro arrays. Then, six months from now, in-situ hybridization receptor binding assays. Or thin layer chromatography. Whole body autoradiography. That is no problem for the BAS-2500.

Perhaps you are in the physical and material sciences and your imaging calls for X-ray crystallography. Semiconductor wafer checking. And, later, non-destructive testing. Again, the BAS-2500 will perform for you.

Regardless of discipline of application, most scientists agree, the better your imaging the more likely your efforts will lead to insight and discovery. This is why the BAS-2500, incorporating Fujifilm's patented phosphor Imaging Plate (IP), is an invaluable part of every laboratory.

The BAS-2500 Scanner's speed and accuracy equal unparalleled throughput

The BAS-2500 is the system of choice for high-density DNA hybridization arrays. It provides spatial resolution adequate for many tissue studies in pharmacokinetics and toxicology. With a dynamic range up to five orders of magnitude, incomparable image quality is guaranteed.

With a Fujifilm BAS-2500, a complete 20 x 40 cm imag-

Multiple-application versatility with imaging performance 100x greater than X-ray film.



ing plate can be scanned within five minutes at 16 bits. And this high throughput is achieved without sacrificing superior sensitivity and quantitative accuracy.

The BAS-2500's range of recommended applications includes Molecular Biology (1D electrophoresis, 2D electrophoresis, DNA & Protein blots and Macro Arrays); Pharmacokinetics & Toxicology (whole body autoradiography and thin layer chromatography); and Physical and Material Structural Analysis (X-ray crystallography, semiconductor wafer check and non-destructive testing).

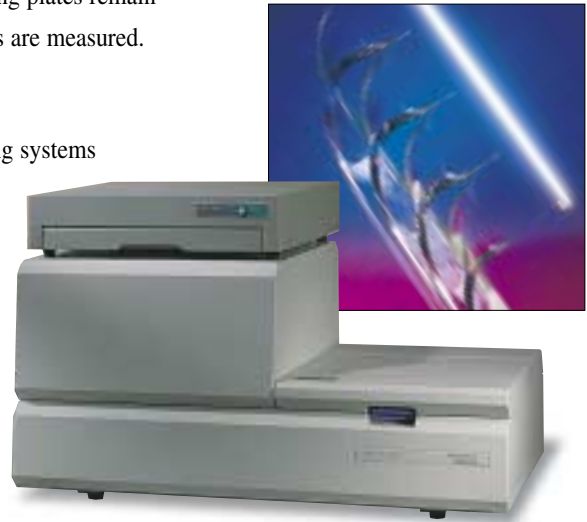
### Reusable Imaging Plate is 100x more sensitive than X-ray film

The Fujifilm IP is a reusable two-dimensional sensor for the detection and storage of ionizing radiation energy in photostimulable phosphor crystals. Fujifilm IPs are approximately 100 times more sensitive than X-ray film, and have greater quantitative accuracy. When Fujifilm IPs and the BAS-2500 sys-

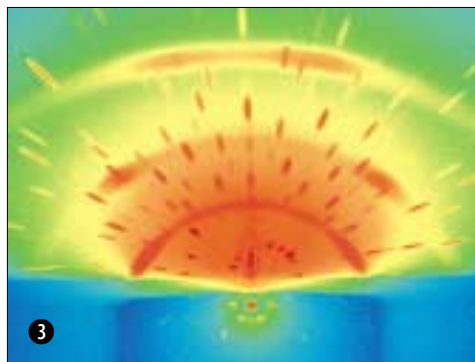
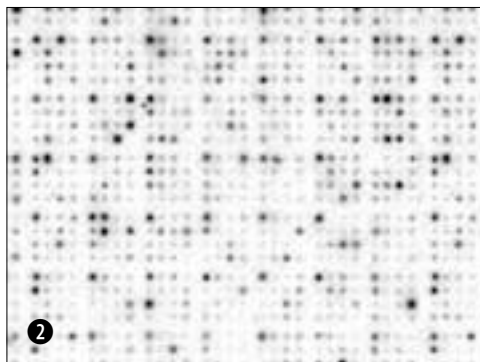
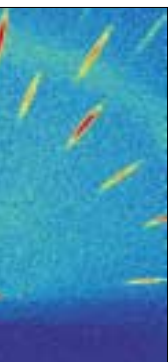
tem replace standard X-ray film and processing, your results are available from 10 to 100 times faster. And because Fujifilm IPs are more sensitive than X-ray film, they capture information unobtainable using X-ray film autoradiography. And all of these advantages can be enjoyed without the need for processing chemicals or a darkroom. While other phosphor imaging systems have appeared, Fujifilm scanners and imaging plates remain the standard by which others are measured.

### Fully networkable

All Fujifilm research imaging systems are easily networked for seamless integration into multi-user laboratory environments. Ask your representative for details.



The BAS-2500 incorporates Fujifilm's proprietary light guide and is manufactured to ISO 9002 standards for maximum efficiency and quality.



Data Images, left to right:

1. Fast thin film phase and orientation analysis of Ta on Si with an exposure time of 3 seconds. Sample courtesy of Dr. Sabrina Lee, Watervliet Arsenal, Professor Toh-Min Lu and Dr. Donald Windover, Rensselaer Polytechnic Institute, Troy, N.Y., U.S.A.
2. Dot blot. Sample courtesy of Assistant Professor Kuniya Abe, Kumamoto University, Faculty of Medicine, Institute of Molecular Embryology and Genetics, Department of Developmental Genetics.
3. Thin film phase and orientation analysis of Ta on Si with an exposure time of 10 minutes. Sample courtesy of Dr. Sabrina Lee, Watervliet Arsenal, Professor Toh-Min Lu and Dr. Donald Windover, Rensselaer Polytechnic Institute, Troy, N.Y., U.S.A.
4. Whole-body rat slice. Fujifilm file image.

# Specifications and Applications

## Specifications

Imaging	
IP Size	20 x 40 cm
Pixel Size	50/100 $\mu\text{m}$
Reading Time	5 min. (50 $\mu\text{m}$ )
Detection Limit	$^{32}\text{P}$ 0.11 dpm/mm <sup>2</sup> /hr $^{14}\text{C}$ 0.90 dpm/mm <sup>2</sup> /hr
Dynamic Range	4/5 orders of magnitude
Gradation	65,536 (16 bits)/256 (8 bits) selectable
Shading	$\pm$ 5% over entire scan area
Imaging Plates (see details below)	
BAS-MS2040, BAS-SR2040, BAS-TR2040, BAS-ND2040	
Dimensions and Weight	
Dimensions	980 mm (w) x 450 mm (H) x 590 mm (D)
Weight	62 kg
Image Reading Software	
ImageReader (MacOS/Windows <sup>®</sup> 95, Windows <sup>®</sup> 98, Windows <sup>®</sup> NT ver. 4.0)	
Image Analysis Software	
Science Lab (MacOS/Windows <sup>®</sup> 95, Windows <sup>®</sup> 98, Windows <sup>®</sup> NT ver. 4.0)	

## Imaging Plates

Size: 2040 (20cm x 40cm)

BAS-MS	Designed for compatibility of high sensitivity and water-resistance. For use with all existing BAS.
BAS-SR	Designed with blue pigment for both optimum sharpness (especially for 50 $\mu\text{m}$ or smaller pixel size) and good wet-sample durability.
BAS-TR	Designed for highest resolution tritium detection, with blue pigment and no surface-protection layer. For use with dry samples.
BAS-ND	Designed for neutron detection, with blue pigment, surface-protection and Gd <sub>2</sub> O <sub>3</sub> converter in the photostimulable layer. Good wet-sample resistance.

 **FUJIFILM**  
I&I – Imaging & Information

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Specifications and system configuration subject to change for improvement without notice. All other product names mentioned herein are the trademarks of their respective owners.

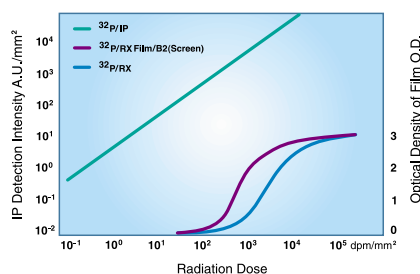
## Applications

Life Science	Genomics and Proteomics Imaging	Molecular Biology	
		1D Electrophoresis	●
		2D Electrophoresis	●
		DNA & Protein Blots	●
		Macro Arrays	●
		Neuroanatomy	●
Physical and Material Sciences	Structural Analysis	Neurophysiology	●
		Immunology & Cell Biology	
		In-Situ Hybridization	●
		Receptor Binding Assays	●
		Pharmacokinetics & Toxicology	
		X-Ray Crystallography	●
Environmental Monitoring	Autoradiography	Semiconductor Wafer Check	●
		Non-Destructive Testing	●
	Dosimetry		●

● Recommended ● Available

## Imaging Plates vs. X-ray Film

The sensitivity of Fujifilm's patented IP provides a highly efficient, uniform and sensitive detection system far superior to that of X-ray film. All Fujifilm IPs, except BAS-TR (tritium detection) IPs, are reusable and there is no need for a darkroom or development and fixing chemicals. There are Fujifilm IPs for virtually any type of emitter, all with superior accuracy.



A comparison of Fujifilm Imaging Plate versus X-ray film.

Additionally, Fujifilm IP images can be repeatedly scanned before erasing the IP for your next experiment.

 Quality system certified to ISO 9002